

THE CLAIMS

1 1-12. (cancelled)

1 13. (previously presented) A cladding tube for nuclear fuel, the cladding tube being made of
2 a zirconium-based alloy suitable for use in a corrosive environment where it is subjected to
3 increased radiation, the alloy having a quality and impurity level, including up to 1600 ppm O
4 and up to 120 ppm Si, suitable for use in nuclear reactors, the alloy consisting essentially of:
5 0.65-1.6 percent by weight Nb;
6 0.3-0.6 percent by weight Fe;
7 0.65-0.85 percent by weight Sn; and
8 the balance being Zr.

1 14-21. (canceled)

1 22. (previously presented) The cladding tube according to claim 13, wherein at least a part of
2 an inner circumference of the cladding tube is provided with a layer of a material that is more
3 ductile than the alloy.

1 23. (previously presented) The cladding tube according to claim 22, wherein the layer
2 comprises a zirconium-based alloy having a total content of alloying elements that does not
3 exceed 0.5 percent by weight.

1 24-34. (canceled)

1 35. (previously presented) A cladding tube for nuclear fuel, the cladding tube being made of
2 a zirconium-based alloy suitable for use in a corrosive environment where it is subjected to
3 increased radiation, the alloy having a quality and impurity level, including, optionally, 500-1600
4 ppm O and, optionally, 50-120 ppm Si, suitable for use in nuclear reactors, the alloy consisting
5 essentially of:

6 0.65-1.6 percent by weight Nb;
7 0.3-0.6 percent by weight Fe;
8 0.65-0.85 percent by weight Sn; and
9 the balance being Zr.

1 36. (previously presented) The cladding tube according to claim 35, wherein at least a part of
2 an inner circumference of the cladding tube is provided with a layer of a material that is more
3 ductile than the alloy.

1 37. (previously presented) The cladding tube according to claim 36, wherein the layer
2 comprises a zirconium-based alloy having a total content of alloying elements that does not
3 exceed 0.5 percent by weight.

1 38. (previously presented) A cladding tube for nuclear fuel, the cladding tube being made of
2 a zirconium-based alloy suitable for use in a corrosive environment where it is subjected to
3 increased radiation, the alloy having a quality and impurity level, including 500-1600 ppm O and
4 50-120 ppm Si, suitable for use in nuclear reactors, the alloy consisting essentially of:

5 0.65-1.6 percent by weight Nb;
6 0.3-0.6 percent by weight Fe;
7 0.65-0.85 percent by weight Sn; and
8 the balance being Zr.

1 39. (previously presented) The cladding tube according to claim 38, wherein at least a part of
2 an inner circumference of the cladding tube is provided with a layer of a material that is more
3 ductile than the alloy.

1 40. (previously presented) The cladding tube according to claim 39, wherein the layer
2 comprises a zirconium-based alloy having a total content of alloying elements that does not
3 exceed 0.5 percent by weight.

1 41. (new) A cladding tube for nuclear fuel, the cladding tube being made of a zirconium-
2 based alloy suitable for use in a corrosive environment where it is subjected to increased
3 radiation, the alloy having a quality and impurity level suitable for use in nuclear reactors, the
4 alloy consisting essentially of:

5 0.65-1.6 percent by weight Nb;
6 0.3-0.6 percent by weight Fe;
7 0.65-0.85 percent by weight Sn; and
8 the balance being Zr.

1 42. (new) The cladding tube according to claim 41, wherein at least a part of an inner
2 circumference of the cladding tube is provided with a layer of a material that is more ductile than
3 the alloy.

1 43. (new) The cladding tube according to claim 42, wherein the layer comprises a
2 zirconium-based alloy having a total content of alloying elements that does not exceed 0.5
3 percent by weight.